* SWBAT solve problems involving change in velocity

Sep 6-2:31 PM

SECA Physics
Monday 14 October 2013

Welcome!!!

H. Leslie Grebe

Centering...

* Pick up:
  - slip of paper (for later)
  - whiteboard, marker, eraser

See Leslie to schedule make-up test...

Opening Question:

Something is accelerating if it is...
- SPEEDING UP
- SLOWING DOWN

or - CHANGING DIRECTIONS

What is it called if your pay changes? RAISE!

Sep 7-7:04 AM

More rate practice...

PHYSICS VERSION
100km/5hr = 20km/hr

* DJ gig last Saturday for \$100, takes 5 hours: How much are you making per hour?
$\frac{\$100}{5hr} = \$20/hr$

* Good job, so you'll do the gig every week and get \$10 per gig **raise** each week: What is the rate of change of your pay?
$+\$10/wk$

100km
+10km/hr · 5wk
= 150km

* How much will you make per gig 5 weeks from now? $\$100 + \$10/wk \cdot 5wk = \$150$

* How much will you make per hour then?
$\$150/5hr = \$30/hr$

* Running Back has 200 yards over the last 4 games. What is his average yards per game?
$\frac{200yd}{4gm} = 50\ yd/gm$

100mi/hr · 3hr
= 300mi

* One excellent running back averages 100 yards/game. How many yards should we expect from him (total) over the next 3 games?
$100yd/gm \cdot 3gm = 300yd$

100mi/hr
−10mi/hr/hr · 3hr
= 70mi/hr

* Tendonitis in his knee. He's losing about 10 yards per game from his average each week. What will his yards per game be after 3 weeks of this?
$100yd/gm - (10yd/gm/wk \cdot 3wk) = 70\ yd/gm$

Oct 19-7:20 AM

Catchy Physics Phrases: Speed, Velocity, Acceleration

Speed is
Change in distance over change in time

$$SPEED = \frac{\Delta d}{\Delta t}$$

Velocity is
Speed with direction

$$DIST = SPEED \cdot TIME$$
$$= 1\frac{m}{s} \cdot 5s.$$

Acceleration is
Change in velocity over change in time
- SPEED UP - SLOW DOWN
- CHANGE DIRECTION

$$a = \frac{\Delta v}{\Delta t}$$

$$VELOCITY = ACCEL \cdot TIME$$
$$= g \cdot 3sec$$

"g" is the acceleration due to gravity
On earth, it is about 10 m/s^2

$$\frac{10m}{1s} \cdot 3s = 30\frac{m}{s}$$

Oct 4-7:27 AM

$$\text{SPEED} = \frac{\Delta d}{\Delta t}$$

DIST = SPEED · TIME

$$a = \frac{\Delta v}{\Delta t}$$

VELOCITY = ACCEL · TIME

ON EARTH

$g = 10\ m/s^2$

Changing rate practice

- Work alone or with one other person

- Do the worksheet

-Check with people around you!

When you're done:
Invent your own question about calculating acceleration

Oct 19-7:20 AM

Daily 3 Questions

* Every day except test/project days
* 3 Questions on the topics of the day
* Main source of daily points
* I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. What is the speed of a bowling ball that moves 6 meters in 3 seconds?

$s = \frac{6m}{3s} = 2 m/s$

2. Light travels in a straight line at a constant speed of 300,000 km/s. What is the light's acceleration?

$\emptyset$

3. If a freely falling rock were equipped with a speedometer, by how much would its speed readings increase with each second of falling?

$10 m/s$

Oct 8-6:48 AM